REMARKS

This Amendment is submitted in response to the outstanding Office Action, dated October 21, 2005. Claims 1 through 22 are presently pending in the above-identified patent application. In this response, applicants propose to amend claims 1-2, 7-8, 13-14, 17-18 and 21-22. No additional fee is due.

In the Office Action, the Examiner rejected claims 1-22 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that applicants regard as the invention. In addition, the Examiner rejected claims 1, 3, 13, 15, and 21 under 35 U.S.C. §103(a) as being unpatentable over Braddy (United States Patent Number 6,304,967) in view of Yoakum et al. (United States Patent Number 6,421,674), rejected claims 2, 4, 5, 14, and 16 under 35 U.S.C. §103(a) as being unpatentable over Braddy and Yoakum in further view of Gampper et al. (United States Patent Number 6,442,601), rejected claim 6 under 35 U.S.C. §103(a) as being unpatentable over Braddy and Yoakum in further view of Smith (United States Patent Number 6,341,311), rejected claims 7-11, 17, 18, (19), 20, and 22 under 35 U.S.C. §103(a) as being unpatentable over Sharma et al. (United States Patent Number 6,182,109) in view of Jordan (United States Patent Number 6,438,652), and rejected claim 12 under 35 U.S.C. §103(a) as being unpatentable over Sharma and Jordan in further view of Smith (United States Patent Number 6,341,311).

Formal Rejections

Claims 1-22 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that applicants regard as the invention. With regard to claims 1, 13, and 21, the Examiner asserts that it appears the step of "redirecting said web resource request to a proxy server associated with said heavy file type" would only occur when it is determined that the web resource is a heavy file type. Claims 1, 13, and 21 have been amended in accordance with the Examiner's suggestions.

Similarly, with regard to claims 7, 17, and 22, the Examiner asserts that it appears the step of "redirecting said web resource request to a proxy server associated with said heavy file type" would only occur when it is determined that the web resource request is served by a domain having a

traffic volume that exceeds a predefined threshold. Claims 7, 17, and 22 have been amended in accordance with the Examiner's suggestions.

Generally, the present invention provides various embodiments that distribute web traffic associated with web sites attracting a high volume of traffic, referred to as "heavy domains," and file types with large mean sizes, referred to as "heavy file types."

The Examiner has objected to the use of the term "heavy file type" in claims 1, 6, 12, 13 and 21. As indicated in Applicants' prior response, and noted by the Examiner, the original specification defined file types with large mean sizes to be "heavy file types" (see, page 3, lines 26-28, of the original disclosure). The present invention teaches for example, that, "generally, the file type list is analyzed to detect and separate requests that are likely to incur a response that is significantly larger than the average file size, referred to herein as "heavy file types."" (Page 7, lines 1-3, of the originally filed disclosure). The Examiner asserts that a person of ordinary skill would not be reasonably apprised of the scope of the invention. Claims 1, 13 and 21 have been amended in accordance with the Examiner's suggestion to recite that "a given file type is determined to be said heavy file type if said given file type satisfies one or more predefined criteria based on a size of files of said given file type." The specification thus teaches exemplary embodiments where the "one or more predefined criteria" can be, for example, (i) file types that are significantly larger than the average file size, (ii) file types having a mean size that exceeds a predefined threshold, or (ii) the top N file types, based on mean size. See also, page 6, line 26, to page 7, line 3.

Similarly, Applicants have also amended Claims 7, 17, and 22 to recite that a heavy domain is "a domain having a traffic volume that satisfies one or more predefined criteria." The specification teaches exemplary embodiments where the "one or more predefined criteria" can be, for example, (i) domains having a traffic volume greater than average, (ii) domains having a traffic volume that exceeds a predefined threshold, or (ii) the top N domains, based on traffic volume. See also, page 6, lines 20-24, and page 8, lines 11-14.

Applicants respectfully request withdrawal of the Section 112 rejections.

Independent Claims

Independent claims 1, 13, and 21 were rejected under 35 U.S.C. §103(a) as being

unpatentable over Braddy in view of Yoakum et al., and claims 7, 17, and 22 were rejected under 35 U.S.C. §103(a) as being unpatentable over Sharma et al. in view of Jordan.

Regarding claims 1, 13, and 21, the Examiner asserts that Braddy discloses redirecting said web resource request to a server associated with said heavy file type (*citing* col. 15, line 61, to col. 16, line 3; col. 13, lines 50-64). In the Response to Arguments section of the present Office Action, the Examiner asserts that Braddy examines a request to determine the file type of the request, also called MIME types. MIME types may include different file types. The Examiner notes that Braddy provides a few examples, including "html," gif," and "jpeg." The file type is determined and the request is forwarded to the appropriate server (*citing* Braddy at col. 15, line 61, to col. 16, line 3).

As indicated in Applicants' prior response, and apparently recognized by the Examiner, Braddy does not disclose or suggest determining if said web resource is a "heavy file type" (e.g., having a file size that exceeds a predefined threshold). The Examiner merely asserts that a file type is determined and the request is forwarded to the appropriate server. Braddy is redirecting file requests, however, based on the *capabilities* of the server. For example, files of a type "mpeg" are redirected to a video server that has *capabilities* for handling video files. The present invention, on the other hand, separates larger files, so that requests for smaller files are not blocked. Thus, Braddy does not disclose or suggest "determining if said web resource is a heavy file type, wherein a given file type is determined to be said heavy file type if said given file type satisfies one or more predefined criteria based on a size of files of said given file type; and redirecting by said client said web resource request to a proxy server associated with said heavy file type *when* it is determined that said web resource is said heavy file type," as required by claims 1, 13 and 21, as amended.

In addition, each of the independent claims have been amended to emphasize that the techniques of the present invention to distribute file types with large mean sizes, referred to as "heavy file types" are performed on the *client-side*. Support for this amendment is shown in FIGS. 1 and 4 of the original specification, and the corresponding textual discussion. See, for example, the Title of the Invention, and page 3, lines 24-26, where it is noted that "A given proxy server is selected based on a proxy selection table *maintained by each client*. " Braddy teaches that "a Filter

Module 112 is a *server side* plug-in software module that handles the processing of the request." (Col. 21, lines 14-16.) Filter Modules 112 are not servers but are components of, for example, the Request Broker 90 (see, FIG. 7) and the Filter Modules 112 are located in the same machine (server) as the Broker Request Processor 104 (see, FIG. 7).

Thus, Braddy does not disclose or suggest a *client-side* method, system, or article of manufacture for selecting a proxy server storing a web resource from among a plurality of proxy servers, as required by claims 1, 13 and 21, as amended, respectively. The body of each of claims 1, 13 and 21, have also been amended to emphasize the client-side nature of the disclosed techniques. The client-side nature of the present invention enhances the user's browsing experience for all web sites, and not just a web site employing the server side techniques of, for example, Braddy.

Independent claims claims 7, 17 and 22 were rejected under 35 U.S.C. §103(a) as being unpatentable over Sharma et al. in view of Jordan.

Regarding claims 7, 17, and 22, the Examiner asserts that Sharma discloses determining if said web resource request is served by a domain having a traffic volume that exceeds a predefined threshold; and redirecting said web request to a server associated with said domain. In the Response to Arguments section of the current Office Action, the Examiner maintains that Sharma discloses that "the number of threads in the pool grows or shrinks dynamically based on the number of concurrently active client requests being processed." (citing Col. 23, lines 48-50).

As indicated above, each of the independent claims have been amended to emphasize that the techniques of the present invention are performed on the client-side. Support for this amendment is shown in FIGS. 1 and 4 of the original specification, and the corresponding textual discussion. Applicants note that Sharma is directed to dynamic management of a pool of execution units *within* a server system, the pool devoted to a communication process between client and server processes. See, Sharma Abstract. The server initialization process of FIG. 8A in Sharma is clearly a server-side process. See, for example, col. 23, line 60, noting that the test at step 579, identified by the Examiner, is performed "on the server."

In addition, Sharma does not suggest *redirecting* by said client said web resource request to a *proxy server* associated with said domain when it is determined that said web resource

request is served by a domain having a traffic volume that satisfies one or more predefined criteria. Rather, if the thread criteria and maximum concurrent request criteria are satisfied, an *execution unit* within the communication process pool of a server system is assigned to the client request.

Thus, Sharma et al. do not disclose or suggest determining if said web resource request is served by a domain having a traffic volume that satisfies one or more predefined criteria; and redirecting by said client said web resource request to a proxy server associated with said domain when it is determined that said web resource request is served by a domain having a traffic volume that satisfies said one or more predefined criteria, as required by independent claims 7, 17, and 22, as amended.

Additional Cited References

Gampper et al. were also cited by the Examiner for disclosing a proxy cache system for saving files of a predetermined minimum size and greater into secondary storage in the cache (col. 6, lines 31-59). Gampper et al. is directed to a system, method, and program for caching files retrieved from a server over a network. (See, Abstract.) Gampper does not address the issue of redirecting web requests to proxy servers.

Thus, Gampper et al. do not disclose or suggest redirecting said web resource request to a proxy server associated with said heavy file type, as required by independent claims 1, 13, and 21, as amended, and do not disclose or suggest determining if said web resource request is served by a domain having a traffic volume that satisfies one or more predefined criteria; and redirecting said web resource request to a proxy server associated with said domain, as required by independent claims 7, 17, and 22.

Smith was also cited by the Examiner for disclosing the access requests in a distributed cache and the addition of a new proxy server into the network (FIG. 11; col. 18, lines 49-53). Smith does not address the issue of considering file type when redirecting web requests to a proxy server. In addition, although Smith considers load factor to assign some proxy servers proportionately more URL data objects, the load factor is "incorporated in the creation of the combined hash values" (col. 5, lines 25-28) and is thus performed prior to receiving the web resource request.

Thus, Smith does not disclose or suggest redirecting said web resource request to a proxy server associated with said heavy file type, as required by independent claims 1, 13, and 21, as amended, and does not disclose or suggest determining if said web resource request is served by a domain having a traffic volume that satisfies one or more predefined criteria; and redirecting said web resource request to a proxy server associated with said domain, as required by independent claims 7, 17, and 22.

Yoakum et al. were also cited by the Examiner for disclosing a request that is passed to subsequent proxy servers which performs a database look-up to determine if a message can be fulfilled. Applicants note that Yoakum is directed to a system for implementing a real-time distributed, hierarchical database using a proxiable protocol (see, Abstract). Yoakum does not address the issue of considering file type when redirecting web requests to a proxy server.

Thus, Yoakum et al. do not disclose or suggest redirecting said web resource request to a proxy server associated with said heavy file type, as required by independent claims 1, 13, and 21, as amended, and do not disclose or suggest determining if said web resource request is served by a domain having a traffic volume that satisfies one or more predefined criteria; and redirecting said web resource request to a proxy server associated with said domain, as required by independent claims 7, 17, and 22.

Jordan was also cited by the Examiner for its disclosure of a method for load balancing proxy cache servers by forwarding requests. Applicant notes that Jordan is directed to load balancing among cooperating cache servers and in particular to load balancing based on load conditions and a frequency that requests are forwarded from cooperating cache servers (col. 1, lines 6-9). Jordan does not address the issue of considering file type when redirecting web requests to a proxy server.

Thus, Jordan does not disclose or suggest redirecting said web resource request to a proxy server associated with said heavy file type, as required by independent claims 1, 13, and 21, as amended, and does not disclose or suggest determining if said web resource request is served by a domain having a traffic volume that satisfies one or more predefined criteria; and redirecting said web resource request to a proxy server associated with said domain, as required by independent

claims 7, 17, and 22.

Dependent Claims 2-6, 8-12, 14-16 and 18-20

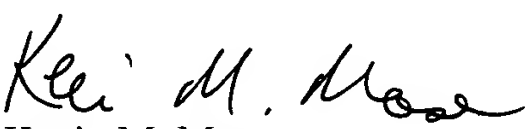
Dependent claims 3 and 15 were rejected under 35 U.S.C. §103(a) as being unpatentable over Braddy in view of Yoakum et al., claims 2, 4, 5, 14, and 16 were rejected under 35 U.S.C. §103(a) as being unpatentable over Braddy and Yoakum in further view of Gampper et al., claim 6 was rejected under 35 U.S.C. §103(a) as being unpatentable over Braddy and Yoakum in further view of Smith, claims 8-11, 18, (19), and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Sharma et al. in view of Jordan, and claim 12 was rejected under 35 U.S.C. §103(a) as being unpatentable over Sharma and Jordan in further view of Smith.

Claims 2-6, 8-12, 14-16 and 18-20 are dependent on claims 1, 7, 13, and 17, respectively, and are therefore patentably distinguished over Braddy, Yoakum et al., Gampper et al., Smith, Sharma et al., and Jordan (alone or in any combination) because of their dependency from amended independent claims 1, 7, 13, and 17 for the reasons set forth above, as well as other elements these claims add in combination to their base claim.

If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Examiner is invited to contact the undersigned at the telephone number indicated below.

The Examiner's attention to this matter is appreciated.

Respectfully submitted,



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